C4ISR - A Future Perspective
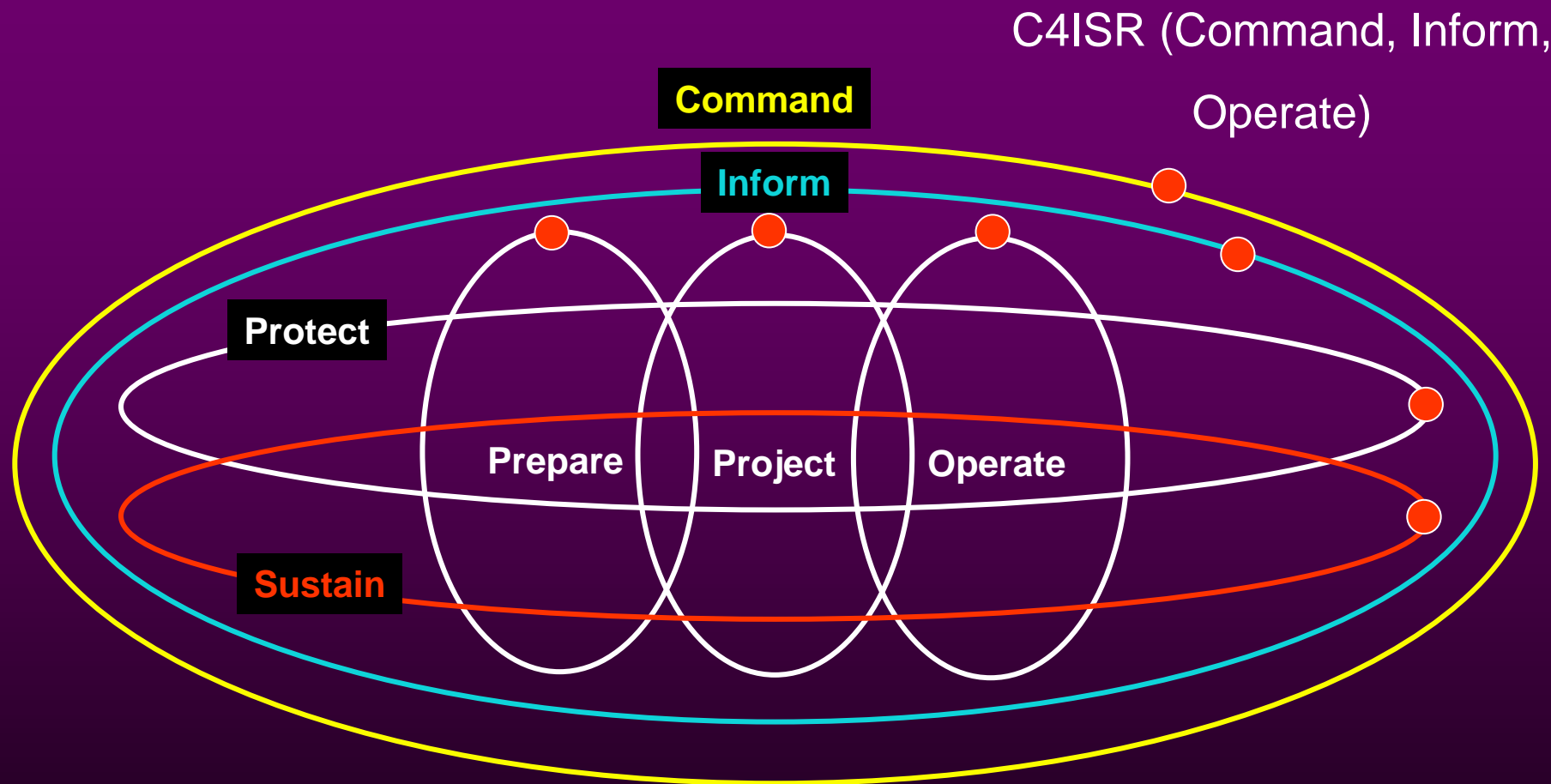
- 5 Key issues

  - 1 - Agility

  - 2 - Interoperability

  - 3 - Operate, 4 - Command, 5 - Inform

    - *The Defence Capability Framework*

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The Defence Capability Framework

C4ISR (Command, Inform, Operate)

Command

Inform

Protect

Prepare **Project** **Operate**

Sustain

'Command' & 'Inform' are inseparable

JOINT DOCTRINE AND CONCEPTS CENTRE
DEFENCE CAPABILITIES FRAMEWORK

INFORM

Component Level

Back

The acquisition, collation, processing, management and distribution of information

Gain Information	Analyse Information	Disseminate Information	Maintain Information
The capability to obtain or secure facts, processed data or instructions in any medium or form	The capability to examine methodically and in detail the constitution or structure of facts, processed data or instructions in any medium or form, in order to add cognitive value to military activity	The capability to distribute selectively facts, processed data or instructions in any medium or form	The capability to ensure the currency, integrity and/or distribution of facts, processed data or instructions in any medium or form

Capability

Areas

Military Strategic Level	Military Strategic Level	Military Strategic Level	Military Strategic Level
Operational Level	Operational Level	Operational Level	Operational Level
Tactical Level	Tactical Level	Tactical Level	Tactical Level

Military

Capabilities

J D C C

Key Issues 1- Metrics of Capability

❑ Agility (enabler for Tempo - 'speed within context')

  ❑ Responsiveness

    ❑ *Speed of reaction (to the unexpected)*

  ❑ Robustness

    ❑ *Capable of multiple missions*

  ❑ Flexibility

    ❑ *Multiple paths to success (unpredictability)*

  ❑ Adaptability

    ❑ *Learning & adapting (to the unexpected)*

Key Issues 2 - Interoperability

- US

  - *Unit of currency - scale or capability - NEC*

- Other Key Allies & 'Coalitions of the Willing'

  - *Rate of technological progression*

  - *Backwards procedural compatibility:* *'UK Armed Forces will require commanders and staffs who have the patience, tact, flexibility and cultural empathy needed to minimise the drag on tempo'*

Key Issues 3 - Operate

- Effects Based Operations

- Lexicon of Effects

  - *Encourage, reassure*

  - *Influence, persuade, dissuade*

  - *Prevent, deter, coerce*

  - *Disrupt, isolate, degrade*

  - *Disable, destroy*

- The ultimate effect is cognitive

Key Issues 4 - Command

- **Philosophy**
    - *Mission Command - 'synchronisation'*
    - *Virtual expression of 'Command Intent'*
    - *Personal qualities of the commander*
- **Structures**
    - *Adaptive C2, 'reach back' & 'reach forward'*
    - *Environmental Components, Levels of Command*
    - *& Staff functions must be reconfigured*

Key Issues 5a - Inform
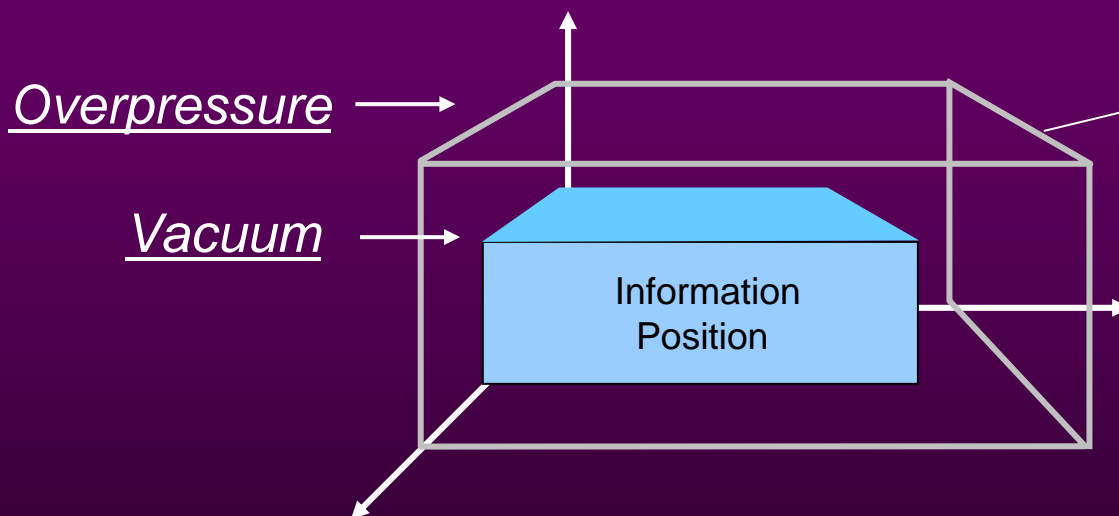
- 'Wider & Deeper' - to enable Effects Based Ops

  - *3 Instruments of Power*

  - *Underlying causes of conflict - appropriate effects*

- *24/7 not always feasible - 'We cannot be all-seeing all the time - we simply do not have the resources' (CDS to RUSI 10 Dec 01)*

Precision & accuracy, currency, timeliness, assurance, completeness

Richness

Information Requirement

Overpressure →

Vacuum →

Information Position

Quality of Interaction

Voice, data, text,

static & dynamic images,

degree of delay, interaction

(collaborative planning)

Reach

Geography, range, continuity, cross-component & echelon,
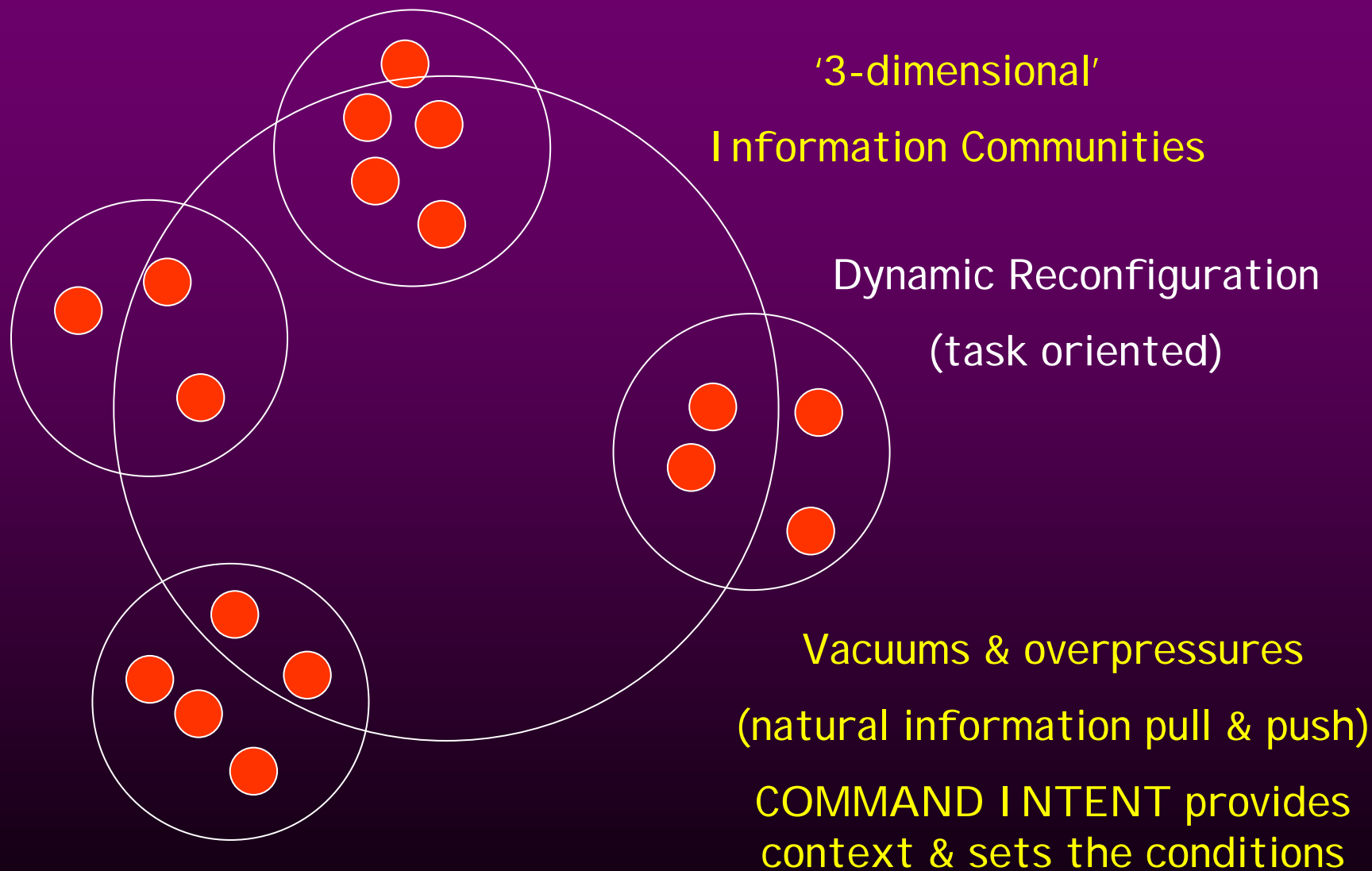
cross-coalition, cross-functional areas

J D C C

Key Issues 5c - Inform 'Wider & Deeper'

7 Dimensions of the
Strategic Environment

Political
Economic
Legal, ethical & moral
Physical
Scientific & technical
Social & Cultural
Military

Levels
of Operation

Grand Strategic

Strategic

Operational

Tactical

Economic

Political

Military

Instruments of Power

'3-dimensional'

Information Communities

J D C C

Key Issues 5d - Inform

'3-dimensional'

Information Communities

Dynamic Reconfiguration

(task oriented)

Vacuums & overpressures

(natural information pull & push)

COMMAND INTENT provides
context & sets the conditions

Key Issues 5e - Inform

- Joint Awareness & Assessment System (JAAS)
  - *More than pictures & graphics*
  - *Covers all Components of Defence Capability*
  - *Richer, shared understanding of R, B, W intent*
  - *History & projection - assist the commander to envisage 'multiple futures'*
- *Procedural Discipline*
  - *A reversal of current trends (e.g. e-mail)?*

J - D - C - C

Summary

- Defence Capability Framework

- Agility

- Interoperability

- Effects Based Operations

- Command

- Inform